GRADATION FOR BC
(As per MORT&H 500-18,Grading-2)

Name of Work	:	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	:	M/s Tejus Consultants
Contractor	:	Nagineni Muniswmynaidu Krishnamurthy
Date of Testing	:	12.11.2018
Type of Mix	:	BC
Sample I/D	:	BC3

Sample Location:	At plant	Date of Sampling:	12.11.2018
Type of material & Purpose:	BC	Date of testing:	12.11.2018
		Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	152	152.0	12.67	87.33	79 - 100
9.50	129	281.0	23.42	76.58	71 - 95
4.75	210	491.0	40.92	59.08	53 - 71
2.360	130	621.0	51.75	48.25	42 - 58
1.180	132	753.0	62.75	37.25	34 - 48
0.600	120	873.0	72.75	27.25	26 - 38
0.300	124	997.0	83.08	16.92	18 - 28
0.150	85	1082.0	90.17	9.83	12 - 20
0.075	50	1132.0	94.33	5.67	4 - 10
Pan	68.0				
Total	1200.0				

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Project Division
Yelahanka Zone
Bangalore

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AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	Nagineni Muniswmynaidu Krishnamurthy		
Proposed Use	BC	**Date of Sampling**	**12.11.2018**
Sample Location	At plant	**Date of Testing**	**12.11.2018**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	386.00	360.00	342.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	285.00	260.00	255.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	101.00	100.00	87.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	26.17	27.78	25.44	
5	Average Aggregate impact value	(%)	26.46			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

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Project Division
Yelahanka Zone
Bangalore

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FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Project :	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor:	Nagineni Muniswmynaidu Krishnamurthy

Type of Material	BC	**Proposed Use**	**BC**
Sample Location	At plant	**Date of Sampling**	**12.11.2018**
		Date of Testing	**12.11.2018**

Size of aggregate		**Flakiness Index**		**Elongation Index**	
Passing through IS sieve, mm	**Retained on IS sieve, mm**	**Total wt. of aggregate retained on sieves (A) gms.**	**Wt. of aggregate passing from Flakiness gauge (B) gms**	**Wt. of aggregate retained on Flakiness gauge (C) gms**	**Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms**
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	630	73	560	70
16.0	12.5	1225	112	1125	85
12.5	10.0	525	72	450	60
10.0	6.3	520	56	460	50
Total		**2900**	**313**	**2595**	**265**

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.79
Elongation Index(%):	10.21
Combined FI+EL (%)	21.01

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Yelahanka Zone
Bangalore

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	Nagineni Muniswmynaidu Krishnamurthy
Date of Testing :	13.11.2018
Type of Mix :	BC
Sample I/D :	BC1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	870	850
2. Weight of Mixture after extraction, g	822	800
3. Weight of Bitumen	48	50
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	1.40	1.70
7. Weight of Bitumen & fines	49.40	51.70
8. Bitumen content in %	5.68	6.08
9. Average Bitumen content in %	**5.88**	
10. Minimum Bitumen content in %	**5.40**	

GRADATION FOR BC AFTER EXTRACTION

(As per MORT&H 500-18,Grading-2)

Sample Location:	At site	Date of Sampling:	13.11.2018
Type of material & Purpose:	BC	Date of testing:	13.11.2018
		Oven Dry Wt.(gms):	822.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	85	85.0	10.34	89.66	79 - 100
9.50	115	200.0	24.33	75.67	71 - 95
4.75	119	319.0	38.81	61.19	53 - 71
2.360	124	443.0	53.89	46.11	42 - 58
1.180	80	523.0	63.63	36.37	34 - 48
0.600	60	583.0	70.92	29.08	26 - 38
0.300	76	659.0	80.17	19.83	18 - 28
0.150	51	710.0	86.37	13.63	12 - 20
0.075	40	750.0	91.24	8.76	4 - 10
Pan	72.0				
Total	822.0				

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Yelahanka Zone
Bangalore

DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	Nagineni Muniswmynaidu Krishnamurthy
Date of Testing :	13.11.2018
Type of Mix :	Tack coat
Sample I/D :	1

Determination	Unit	Test No		
		1	2	3
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.784	0.786	0.753
Final weight of plate after application of tack Coat (c)	Kg	0.807	0.809	0.776
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.250	0.256	0.251
Average	Kg/sq.m	0.252		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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Yelahanka Zone
Bangalore

AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

TEJUS CONSULTANTS

Project	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	Nagineni Muniswmynaidu Krishnamurthy.		
Proposed Use	WMM	**Date of Sampling**	**02.8.2018**
Sample Location	**At plant**	**Date of Testing**	**02.8.2018**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	352.00	348.00	350.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	271.00	276.00	275.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	81.00	72.00	75.00	
4	Aggregate Impact Value (%)	(Wc/Wa)* 100	23.01	20.69	21.43	
5	Average Aggregate impact value	(%)	21.71			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

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AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

TEJUS CONSULTANTS

Project	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	Nagineni Muniswmynaidu Krishnamurthy		
Proposed Use	WMM	**Date of Sampling**	**02.8.2018**
Sample Location	**At plant**	**Date of Testing**	**02.8.2018**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	357.00	345.00	350.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	270.00	279.00	275.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	87.00	66.00	75.00	
4	Aggregate Impact Value (%)	(Wc/Wa)* 100	24.37	19.13	21.43	
5	Average Aggregate impact value	(%)	21.64			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

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FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Project	1.Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division 2. Providing street lights in ward no 05 surrounding areas byatarayanapura sub division 3. Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6. Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division 7. Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division 8. Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division.
Client	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	M/s Tejus Consultants
Contractor	Nagineni Muniswmynaidu Krishnamurthy.

Type of Material	WMM	**Proposed Use**	WMM
Sample Location	At plant	**Date of Sampling**	02.08.2018
		Date of Testing	02.08.2018

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	855	78	777	50
16.0	12.5	1200	117	1083	120
12.5	10.0	451	76	375	62
10.0	6.3	500	65	435	38
Total		**3006**	**336**	**2670**	**270**

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	11.18
Elongation Index(%):	10.11
Combined FI+EL (%)	21.29

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